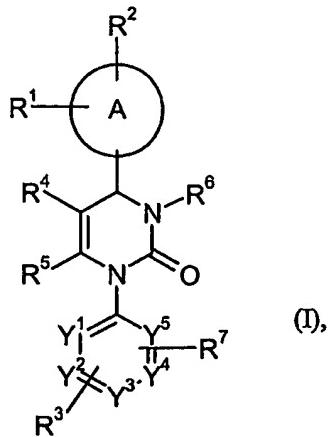


We claim

1. Compounds of the general formula (I)



wherein

5 A represents an aryl or heteroaryl ring,

R¹, R² and R³ independently from each other represent hydrogen, halogen, nitro, cyano, C₁-C₆-alkyl, hydroxy or C₁-C₆-alkoxy, wherein C₁-C₆-alkyl and C₁-C₆-alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy and C₁-C₄-alkoxy,

10 R⁴ represents trifluoromethylcarbonyl, C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, C₂-C₆-alkenoxycarbonyl, hydroxycarbonyl, aminocarbonyl, mono- or di-C₁-C₄-alkylaminocarbonyl, C₆-C₁₀-arylamino carbonyl, arylcarbonyl, heteroarylcarbonyl, heterocyclcarbonyl, heteroaryl, heterocycl or cyano, wherein C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, mono- and di-C₁-C₄-alkylaminocarbonyl can be further substituted with one to three identical or different radicals selected from the group consisting of C₃-C₈-cycloalkyl, hydroxy, C₁-C₄-alkoxy, C₁-C₄-alkoxy-carbonyl, hydroxycarbonyl, aminocarbonyl, mono- and di-C₁-C₄-alkylaminocarbonyl, C₁-C₄-alkylcarbonylamino, N-(C₁-C₄-alkylcarbonyl)-N-(C₁-C₄-alkyl)-amino, cyano, amino, mono- and di-C₁-C₄-alkylamino, heteroaryl, heterocycl and tri-(C₁-C₆-alkyl)-silyl, and wherein heteroarylcarbonyl, heterocyclcarbonyl, heteroaryl and heterocycl can be further substituted with C₁-C₄-alkyl,

20 R⁵ represents C₁-C₄-alkyl, which can be substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy, C₁-C₆-

alkoxy, C₂-C₆-alkenoxy, C₁-C₆-alkylthio, amino, mono- and di-C₁-C₆-alkylamino, arylamino, hydroxycarbonyl, C₁-C₆-alkoxycarbonyl and the radical -O-C₁-C₄-alkyl-O-C₁-C₄-alkyl,

or

5 R⁵ represents amino,

R⁶ represents

- a group of the formula -T-U wherein

T represents a C₁-C₆-alkanediyl or C₂-C₆-alkenediyl group

and

10 U represents

- C₆-C₁₀-aryl or 5- or 6-membered heteroaryl each of which is substituted by one, two or three radicals independently selected from the group consisting of halogen, C₁-C₆-alkyl, 5- or 6-membered heteroaryl and a group of the formula -V-W wherein V represents a bond or a C₁-C₆-alkanediyl or C₂-C₆-alkenediyl group both of which can be further substituted by C₃-C₈-cycloalkyl, and W represents C₁-C₆-alkoxycarbonyl or hydroxycarbonyl,

- a group of the formula -C(=O)-NR^a-SO₂-R^b wherein R^a represents hydrogen or C₁-C₆-alkyl, and R^b represents C₁-C₆-alkyl which can be substituted by trifluoromethyl, or R^b represents C₆-C₁₀-aryl which can be substituted by C₁-C₆-alkyl, halogen, cyano, nitro or trifluoromethyl,

- a group of the formula -C(=O)-NR^cR^d wherein R^c represents hydrogen or C₁-C₆-alkyl, and R^d represents C₆-C₁₀-aryl which can be substituted by C₁-C₆-alkoxycarbonyl or hydroxycarbonyl,

- a group of the formula -C(=O)-NR^e-OR^f wherein R^e and R^f independently from each other represent hydrogen or C₁-C₆-alkyl,

25 or

- C₆-C₁₀-aryalkoxy which, in the aryl part, can be substituted by halogen, C₁-C₆-alkyl, C₁-C₆-alkoxycarbonyl or hydroxycarbonyl,

or

R⁶ represents

- C₃-C₈-cycloalkyl which can be substituted by up to three radicals independently selected from the group consisting of C₁-C₆-alkyl, hydroxy, oxo, C₁-C₆-alkoxy-carbonyl and hydroxycarbonyl,
- C₂-C₆-alkenyl which can be substituted by C₁-C₆-alkoxycarbonyl or hydroxycarbonyl,
- C₁-C₆-alkyl or C₁-C₆-alkylcarbonyl which are substituted by C₁-C₆-alkoxycarbonyl-amino,
- C₁-C₆-alkoxycarbonyl which is substituted by phenyl-C₁-C₆-alkoxycarbonyl which for its part, in the phenyl moiety, can be further substituted by halogen, C₁-C₆-alkyl, C₁-C₆-alkoxycarbonyl or hydroxycarbonyl,

10

or

- a group of the formula -SO₂-R⁸ wherein R⁸ represents C₁-C₆-alkyl which can be substituted by trifluoromethyl, or R⁸ represents C₆-C₁₀-aryl which can be substituted by C₁-C₆-alkyl, halogen, cyano, nitro, trifluoromethyl, C₁-C₆-alkoxycarbonyl or hydroxycarbonyl,

15

R⁷

represents halogen, nitro, cyano, C₁-C₆-alkyl, hydroxy or C₁-C₆-alkoxy, wherein C₁-C₆-alkyl and C₁-C₆-alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy and C₁-C₄-alkoxy,

20

and

Y¹, Y², Y³, Y⁴ and Y⁵ independently from each other represent CH or N, wherein the ring contains either 0, 1 or 2 nitrogen atoms,

25

and their salts, hydrates and/or solvates and their tautomeric forms.

2. Compounds of general formula (I) according to Claim 1, wherein

A represents an aryl or heteroaryl ring,

R^1 , R^2 and R^3 independently from each other represent hydrogen, halogen, nitro, cyano, C_1 - C_6 -alkyl, hydroxy or C_1 - C_6 -alkoxy, wherein C_1 - C_6 -alkyl and C_1 - C_6 -alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy and C_1 - C_4 -alkoxy,

5 R^4 represents C_1 - C_6 -alkylcarbonyl, C_1 - C_6 -alkoxycarbonyl, C_2 - C_6 -alkenoxy carbonyl, hydroxycarbonyl, aminocarbonyl, mono- or di- C_1 - C_4 -alkylaminocarbonyl, C_6 - C_{10} -arylamino carbonyl, heteroaryl carbonyl, heterocyclcarbonyl, heteroaryl, heterocycl or cyano, wherein C_1 - C_6 -alkylcarbonyl, C_1 - C_6 -alkoxycarbonyl, mono- and di- C_1 - C_4 -alkylaminocarbonyl can be further substituted with one to three identical or different radicals selected from the group consisting of C_3 - C_8 -cycloalkyl, hydroxy, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxycarbonyl, hydroxycarbonyl, aminocarbonyl, mono- and di- C_1 - C_4 -alkylaminocarbonyl, C_1 - C_4 -alkylcarbonylamino, amino, mono- and di- C_1 - C_4 -alkylamino, heteroaryl, heterocycl and tri-(C_1 - C_6 -alkyl)-silyl,

10 R^5 represents C_1 - C_4 -alkyl, which can be substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy, C_1 - C_6 -alkoxy, C_2 - C_6 -alkenoxy, C_1 - C_6 -alkylthio, amino, mono- and di- C_1 - C_6 -alkylamino, arylamino, hydroxycarbonyl, C_1 - C_6 -alkoxycarbonyl and the radical -O- C_1 - C_4 -alkyl-O- C_1 - C_4 -alkyl,

15 R^6 represents
20 – a group of the formula -T-U wherein

T represents a C_1 - C_4 -alkanediyl or C_2 - C_4 -alkenediyl group

and

U represents

25 • C_6 - C_{10} -aryl or 5- or 6-membered heteroaryl each of which is substituted by one, two or three radicals independently selected from the group consisting of halogen, C_1 - C_6 -alkyl, 5- or 6-membered heteroaryl and a group of the formula -V-W wherein V represents a bond, a C_2 - C_6 -alkenediyl group or a C_1 - C_6 -alkanediyl group the latter of which can be further substituted by C_3 - C_8 -cycloalkyl, and W represents C_1 - C_6 -alkoxycarbonyl or hydroxycarbonyl,
30

- a group of the formula $-C(=O)-NH-SO_2-R^b$ wherein R^b represents C_1-C_6 -alkyl which can be substituted by trifluoromethyl, or R^b represents C_6-C_{10} -aryl which can be substituted by C_1-C_6 -alkyl, halogen, cyano, nitro or trifluoromethyl,

5

or

- a group of the formula $-C(=O)-NHR^d$ wherein R^d represents C_6-C_{10} -aryl which can be substituted by C_1-C_6 -alkoxycarbonyl or hydroxycarbonyl,

or

 R^6 represents

10

- C_3-C_8 -cycloalkyl which can be substituted by up to three radicals independently selected from the group consisting of C_1-C_6 -alkyl, hydroxy, oxo, C_1-C_6 -alkoxy-carbonyl and hydroxycarbonyl,

or

15

- C_2-C_6 -alkenyl which can be substituted by C_1-C_6 -alkoxycarbonyl or hydroxycarbonyl,

 R^7 represents halogen, nitro, cyano, C_1-C_6 -alkyl, hydroxy or C_1-C_6 -alkoxy, wherein C_1-C_6 -alkyl and C_1-C_6 -alkoxy can be further substituted with one to three identical or different radicals selected from the group consisting of halogen, hydroxy and C_1-C_4 -alkoxy,

20

and

 Y^1, Y^2, Y^3, Y^4 and Y^5 independently from each other represent CH or N, wherein the ring contains either 0, 1 or 2 nitrogen atoms.

3. Compounds of general formula (I) according to Claim 1 , wherein

A represents a phenyl, naphthyl or pyridyl ring,

25

 R^1, R^2 and R^3 independently from each other represent hydrogen, fluoro, chloro, bromo, nitro, cyano, methyl, ethyl, trifluoromethyl or trifluoromethoxy,

5 R⁴ represents C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl, allyloxycarbonyl, hydroxycarbonyl, aminocarbonyl, mono-C₁-C₄-alkylaminocarbonyl, furylcarbonyl, pyridylcarbonyl or cyano, wherein C₁-C₆-alkylcarbonyl, C₁-C₆-alkoxycarbonyl and mono-C₁-C₄-alkylaminocarbonyl can be substituted with one to three identical or different radicals selected from the group consisting of C₃-C₆-cycloalkyl, hydroxy, C₁-C₄-alkoxy, C₁-C₄-alkoxycarbonyl, hydroxycarbonyl, amino, mono- and di-C₁-C₄-alkylamino,

10 R⁵ represents methyl or ethyl,

15 R⁶ represents

20 - a group of the formula -T-U wherein

25 T represents a C₁-C₄-alkanediyl group

15 and

20 U represents

- 15 • phenyl, furyl, thienyl, oxazolyl, thiazolyl or pyridyl each of which is substituted by one or two radicals independently selected from the group consisting of fluoro, chloro, bromo, C₁-C₄-alkyl, thienyl, pyridyl and a group of the formula -V-W wherein V represents a bond or a C₁-C₄-alkanediyl or C₂-C₄-alkenediyl group, and W represents C₁-C₄-alkoxycarbonyl or hydroxycarbonyl,

- 25 • a group of the formula -C(=O)-NH-SO₂-R^b wherein R^b represents C₁-C₄-alkyl which can be substituted by trifluoromethyl, or R^b represents phenyl which can be substituted by C₁-C₄-alkyl, fluoro, chloro, bromo, cyano, nitro or trifluoromethyl,

20 or

- 25 • a group of the formula -C(=O)-NHR^d wherein R^d represents phenyl which can be substituted by C₁-C₄-alkoxycarbonyl or hydroxycarbonyl,

or

30 R⁶ represents

- C_3 - C_6 -cycloalkyl which can be substituted by up to two radicals independently selected from the group consisting of C_1 - C_4 -alkyl, hydroxy, oxo, C_1 - C_4 -alkoxy-carbonyl and hydroxycarbonyl,

or

- 5
 - C_2 - C_4 -alkenyl which is substituted by C_1 - C_4 -alkoxycarbonyl or hydroxycarbonyl,

R^7 represents halogen, nitro, cyano, trifluoromethyl, trifluoromethoxy, methyl or ethyl,

and

Y^1 , Y^2 , Y^3 , Y^4 and Y^5 each represent CH.

- 10 4. Compounds of general formula (I) according to Claim 1, wherein

A represents a phenyl or a pyridyl ring,

R^1 and R^3 each represent hydrogen,

R^2 represents fluoro, chloro, bromo, nitro or cyano,

15 R^4 represents cyano, hydroxycarbonyl, furylcarbonyl, pyridylcarbonyl, C_1 - C_4 -alkyl-carbonyl or C_1 - C_4 -alkoxycarbonyl, wherein C_1 - C_4 -alkylcarbonyl and C_1 - C_4 -alkoxy-carbonyl can be substituted with a radical selected from the group consisting of hydroxy, C_1 - C_4 -alkoxy, C_1 - C_4 -alkoxycarbonyl, hydroxycarbonyl, mono- and di- C_1 - C_4 -alkylamino,

R^5 represents methyl,

20 R^6 represents

- a group of the formula -T-U wherein

T represents a -CH₂- group

and

U represents

- phenyl, furyl or oxazolyl each of which is substituted by one or two radicals independently selected from the group consisting of fluoro, chloro, bromo, C₁-C₄-alkyl and a group of the formula -V-W wherein V represents a bond, a -CH₂- group or a -CH=CH- group, and W represents C₁-C₄-alkoxycarbonyl or hydroxycarbonyl,

5

- a group of the formula -C(=O)-NH-SO₂-R^b wherein R^b represents C₁-C₄-alkyl which can be substituted by trifluoromethyl, or R^b represents phenyl which can be substituted by C₁-C₄-alkyl, fluoro, chloro, bromo, cyano, nitro or trifluoromethyl,

10

or

- a group of the formula -C(=O)-NHR^d wherein R^d represents phenyl which can be substituted by C₁-C₄-alkoxycarbonyl or hydroxycarbonyl,

or

R⁶ represents

15

- C₃-C₆-cycloalkyl which can be substituted by up to two radicals independently selected from the group consisting of C₁-C₄-alkyl, hydroxy, oxo, C₁-C₄-alkoxy-carbonyl and hydroxycarbonyl,

or

20

- a -CH=CH- group which is substituted by C₁-C₄-alkoxycarbonyl or hydroxycarbonyl,

R⁷ represents trifluoromethyl or nitro,

and

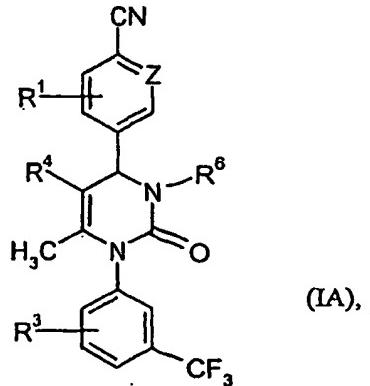
Y¹, Y², Y³, Y⁴ and Y⁵ each represent CH.

25

5. Compounds of general formula (I) according to any of the preceding claims, wherein A is phenyl or pyridyl.
6. Compounds of general formula (I) according to any of the preceding claims, wherein R¹ is hydrogen.

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7. Compounds of general formula (I) according to any of the preceding claims, wherein R² is cyano.
8. Compounds of general formula (I) according to any of the preceding claims, wherein R³ is hydrogen.
- 5 9. Compounds of general formula (I) according to any of the preceding claims, wherein R⁴ is C₁-C₄-alkoxycarbonyl optionally substituted by hydroxy, or wherein R⁴ is C₁-C₄-alkylcarbonyl, hydroxycarbonyl or cyano.
10. Compounds of general formula (I) according to any of the preceding claims, wherein R⁵ is methyl.
- 10 11. Compounds of general formula (I) according to any of the preceding claims, wherein R⁷ is trifluoromethyl or nitro.
12. Compounds of general formula (IA)



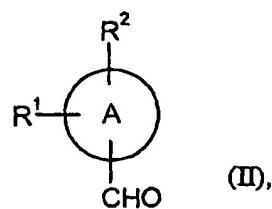
wherein

15 Z represents CH or N, and

R¹, R³, R⁴ and R⁶ have the meaning indicated in any of the preceding claims.

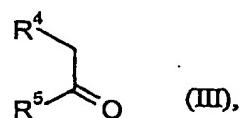
13. Process for synthesizing the compounds of general formula (I) according to Claim 1, by condensing compounds of general formula (II)

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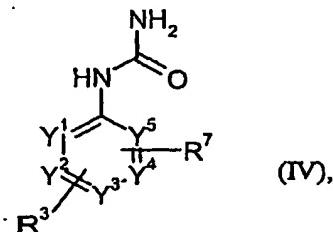
wherein A, R¹ and R² have the meaning indicated in Claim 1,

with compounds of general formula (III)



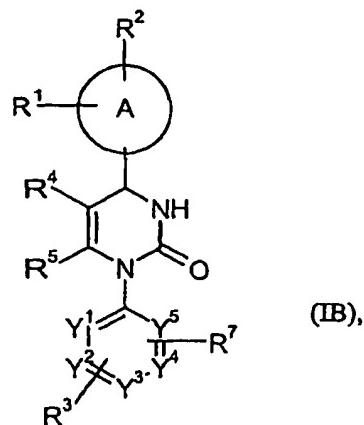
5 wherein R⁴ and R⁵ have the meaning indicated in Claim 1,

and compounds of general formula (IV)



wherein R³, R⁷, and Yⁱ to Y⁵ have the meaning indicated in Claim 1,

to give compounds of the general formula (IB)



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wherein A, R¹ to R⁵, R⁷, and Y¹ to Y⁵ have the meaning indicated in Claim 1,

followed by reaction of the compounds of general formula (IB) with compounds of the general formula (V)

R⁶-X (V),

5 wherein

R⁶ has the meaning indicated in Claim 1, and

X represents a leaving group,

in the presence of a base.

- 14. 13. The composition containing at least one compound of general formula (I) according to Claim 1 and a pharmacologically acceptable diluent.
- 15. 14. A composition according to Claim 14 for the treatment of acute and chronic inflammatory, ischaemic and/or remodelling processes.
- 16. 15. The process for the preparation of compositions according to Claim 14 and 15 characterized in that the compounds of general formula (I) according to Claim 1 together with customary auxiliaries are brought into a suitable application form.
- 17. 16. Use of the compounds of general formula (I) according to Claim 1 for the preparation of medicaments.
- 18. 17. Use according to Claim 17 for the preparation of medicaments for the treatment of acute and chronic inflammatory, ischaemic and/or remodelling processes.
- 20 19. 18. Use according to Claim 18, wherein the process is chronic obstructive pulmonary disease, acute coronary syndrome, acute myocardial infarction or development of heart failure.
- 25 20. 19. Process for controlling chronic obstructive pulmonary disease, acute coronary syndrome, acute myocardial infarction or development of heart failure in humans and animals by administration of a neutrophil elastase inhibitory amount of at least one compound of general formula (I) according to Claim 1.